

# Acts of first aid: a civic responsibility

In the event of a medical emergency, alerting the professional emergency services and actions taken by any witness present prior to their arrival can improve the victim's chances of survival and reduce the risk of them suffering major consequences. It is estimated, for example, that four in five people who survive a cardiac arrest will have received first aid administered by a witness present at the scene. As a result, the average citizen can represent the first, essential link in the 'chain of survival'.

Whereas 95% of Norwegians and 80% of Austrians have received some form of life-saving training, the vast majority of French citizens have not and would be helpless in the event of an accident. As yet, the training system in place is based on voluntary approaches whereby participants receive training as part of a hobby or because they are prompted or

obliged to for the purposes of their professional or educational development. This means that such initiatives do not reach the entire population. The public strategy for promoting civic action in the event of an emergency must be made both more efficient and more effective. In order to achieve this, the physical environment must facilitate intervention on the part of the average citizen by providing a clearly identified emergency number and easy localisation of defibrillators. Training initiatives will then need to be stepped up (particularly where all secondary-school pupils are concerned). Last but not least, it is important to raise awareness among citizens of all ages by means of renewed messages focusing on both preventing risks and what to do in the event of an emergency. ■

## PROPOSALS

- 1 To undertake the process of replacing the current French emergency lines (15 and 18) with the European emergency number (112). To simultaneously launch a campaign aimed at promoting this future single number among the public.
- 2 To create a public database of all defibrillator location points in order to enable the telephone emergency services and citizens to locate the closest device.
- 3 To consider introducing a tax credit for anyone receiving first aid training, provided by an association, in their own time.
- 4 In teacher training and education colleges:
  - to train all teaching staff in first aid;
  - to offer training to become first aid trainers.
- 5 To bring the means used to circulate first aid-related information up to date by:
  - circulating shorter, more targeted messages designed to facilitate the assimilation of the information;
  - making use of the places and times when people are most available and receptive (such as airports, stations, etc.);
  - using digital tools and materials designed to reduce the stress associated with learning such concepts.
- 6 To provide training in maternity wards for young parents, combining both advice on risk prevention and first aid training.

▶ **THE CHALLENGES** Citizens have long been kept out of the picture when it comes to providing emergency assistance to those in danger. The opinion of most was that the seriousness of the situation required a professional response since the layman did not have the necessary expertise to intervene without leaving the victim open to additional risks.

▶ However, many studies have contradicted this presupposition, vouching instead for the importance of the first person on the scene in reducing the risk of mortality and morbidity, particularly in the case of everyday accidents and heart problems. With this in mind, the public authorities decided to involve citizens in the provision of emergency care. Training in 'life-saving techniques' has therefore been directed towards the general public, drawing, notably, on the expertise of associations in the sector, primarily including the French Red Cross.

Despite such efforts, France is still way behind the Norwegian and Austrian populations, for example, when it comes to the involvement of citizens in emergency situations. Whilst the French do appear to have realised the importance of alerting the emergency services, they also seem to be less able when it comes to administering first aid themselves.

As a result, it is important to give all individuals the means to act in the event of an emergency without placing too much responsibility on the person administering the first aid. Indeed, emergency situations are very difficult to apprehend, particularly since the victims are often friends or family members.

## ▶ CONTRASTING EUROPEAN STRATEGIES WHEN IT COMES TO SAVING LIVES

### ( Why give citizens first aid training?

The French emergency services (fire service and emergency medical services) arrive within an average of 14 minutes<sup>(1)</sup>, whereas in the event of a medical emergency (haemorrhage, allergic reaction, choking, unconsciousness, heart problems, etc.), those first minutes are crucial<sup>(2)</sup>. The speed with which the professional emergency services are alerted and the rapid intervention of a witness in the time it takes them to arrive can not only improve the chances of the victim surviving but also reduce the risk of them suffering major consequences.

Of course, citizen should not be seen as a substitute for professional emergency services, but they can be the first link in the 'chain of survival'. Firstly, it is important that the first witness be able to recognise the symptoms that require fast action. In the event of a cerebrovascular accident (CVA), for example (of which there are 130,000 new cases a year in France), the victim should ideally receive medical care within the first 90 minutes<sup>(3)</sup>. It is then important that the witness knows how to act, that he makes the necessary phone call, secures the area, and even administers first aid before handing over to the professional services, thus improving the effectiveness of the care the victim receives. Involving the citizen in this way can be all the more useful since, in the majority of cases, accidents usually occur in front of a witness<sup>(4)</sup>, generally in the home.

The St. John Ambulance estimates that 140,000 people die every year in the UK having failed to receive vital first aid that might have saved their lives (the equivalent of the number of deaths caused by cancer every year)<sup>(5)</sup>. It is, however, difficult to put an exact figure on the impact on the population as a whole, in terms of both mortality and morbidity, of the first witness on the scene taking appropriate action. Nevertheless, it would appear that action taken by the general public could be particularly effective in the case of two major types of accident: cardiac arrests and everyday accidents (including domestic and sport and leisure-related accidents). The correct action taken by a witness to resuscitate a victim immediately after a cardiac arrest, for example, can double or even triple the victim's chances of survival<sup>(6)</sup>. Four victims in five who survive such a situation will have received first aid administered by a witness at the scene<sup>(7)</sup>.

[1] Larcen A. and Julien H. (2011), *Le secourisme en France. Panorama et perspectives*, Académie Nationale de Médecine, Lavoisier.

[2] Ibid.

[3] The purpose of the "AVC, agir vite c'est important", ('CVA - acting quickly is important') campaign launched in 2012 is precisely to teach the population how to recognise the signs of a CVA.

[4] Seven in ten of cardiac arrests occur in front of a witness, for example. Data from the *Centre d'Expertise de la Mort Subite* ['Centre of Expertise on Sudden Death', <http://www.mort-subite.com>].

[5] Main argument of the *Helpless* campaign launched by St John Ambulance in 2012.

[6] Nolana J., Soarb J., Zidemanc D. et al. (2010), "European Resuscitation Council Guidelines for Resuscitation 2010", *Resuscitation*, vol. 81, no. 10.

[7] Fédération Française de Cardiologie (2008), *Arrêt cardiaque, 1 vie = 3 gestes*.

In France, over 50,000 people suffer a cardiac arrest every year and only 3% survive. In some cities, such as Stavanger in Norway and Seattle in the United States, this rate is far higher (Box 1). There are **multiple factors that affect local disparities in chances of survival**. Good results are achieved thanks to the combination of a **reactive rescue system**, the installation of a large number of **defibrillators** and **wide-scale education for the population** in administering first aid (in those areas with the best results in terms of survival, 50-60% of witnesses will perform cardiac massage<sup>(8)</sup>). In France, **less than one in five people** witnessing a cardiac arrest **administer first aid**<sup>(9)</sup>.

 **Box 1**

**A high cardiac arrest survival rate in Seattle thanks to a long-established high level of involvement on the part of the city**

In 2012, the cardiac arrest (ventricular fibrillation) survival rate outside of a hospital situation and in front of a witness exceeded 50% in the state of Seattle<sup>(10)</sup>. This rate was closer to 5% in other major American cities. The result is the fruit of an involvement on the part of local people that dates back to the 1970s. The emergency services have been improved (creation of a mobile emergency unit devoted specifically to cardiac arrests, installation of defibrillators in police vehicles, etc.), and at the same time, emphasis has been placed on the public with suitable training initiatives being put in place, particularly in schools (a cardiopulmonary resuscitation class is now compulsory for all children between 12 and 13 years of age, with the option for 14-15-year-olds to take a refresher course).

As a result, in 2008, 79% of the population claimed to have taken a first aid course and 71% of inhabitants stated that they were able to perform cardiac massage.

This phenomenon is by no means limited to cardiac arrests; **indeed, there are many situations in which first aid can be useful**.

In general, we immediately think about **road accidents**; in actual fact, the action taken by the layperson can prove decisive (securing the area, raising the alarm, etc.), but it rarely materialises into the administering of first aid due to the serious nature of such accidents.

Raising awareness among the general public, on the other hand, could have an impact on the everyday accidents which result in 11 million injuries a year in France and 19,000 deaths (as the result of a fall, asphyxiation, a

burn, etc.), that is nearly five times more than deaths on the road<sup>(11)</sup>. These account for 4% of annual deaths (the third-largest cause of death after cancer and cardiovascular disease)<sup>(12)</sup>.

The positive effects of raising awareness of first aid are also being felt beyond the boundaries of emergency situations; indeed, life-saving training is also believed to have a **preventive effect** since it appears to lead the individual to behave in a safer manner (reducing driving speed, for example<sup>(13)</sup>).

**( First aid in Europe: a very diverse picture**

It is difficult to produce an accurate picture of those members of the population trained in first aid in France and abroad since there is little data available that can be compared between one country to another.

The International Federation of Red Cross and Red Crescent Societies (IFRC) and the European Reference Centre for First Aid Education, however, conducted a survey among national Red Cross societies in 2009 with a view to pooling the existing data, a project that revealed significant variations in the levels of training received<sup>(14)</sup>.

The result was a country-specific typology reflecting the involvement of the public authorities and associations operating in the sector:

- ▶ **In Scandinavian and Central European countries** (Germany, Austria, etc.), very high proportions of the population (95% in Norway, for example) have received training. In such countries, first aid training is very widespread and based on a **series of laws that make it compulsory** in schools and workplaces and for those wishing to obtain a driving license.
- ▶ **The Anglo-Saxon countries and the Netherlands** rely on **citizens volunteering** by means of associations operating in the field. In the United Kingdom, for example, the St. John Ambulance organisation helps train a million people every year, including 700,000 young people in the schools concerned. One in five British citizen claims to have some basic knowledge of first aid.
- ▶ **The South and Eastern European countries** have few citizens trained in administering first aid, with the latter still seen as a **job for professionals**. These States, which are generally more centralised, rely heavily on their rescue and emergency services.



[8] Figures from the European EuReCa project.

[9] Fédération Française de Cardiologie [2008], *op. cit.*

[10] Division of Emergency Medical Services [2012], Annual Report to the King County Council, Public Health-Seattle and King County.

[11] Cassan P. [2012], *Les premiers secours pour les nuls*, First éditions.

[12] As well as 4.5 million calls to the rescue services. InVS data: <http://www.invs.sante.fr/Regions-et-territoires/L-InVS-dans-votre-region/Ocean-Indien-Reunion-Mayotte/Programmes-de-la-Cire-a-la-Reunion/Dispositif-de-surveillance-des-accidents-de-la-vie-courante-a-la-Reunion-Epac>

[13] Larsson E., Mårtensson N. and Alexanderson K. [2002], "First-aid training and bystander actions at traffic crashes-a population study", *Prehosp Disaster Med*, 17 [3].

[14] International Federation of Red Cross and Red Crescent Societies and European Reference Centre for First Aid Education [2009], "Premiers secours : pour une Europe plus sûre".

France lies somewhere in the middle of the scale in this respect. Associations lament the lack of consideration and means devoted to first aid by public authorities, although this situation should be qualified. A series of **voluntary policies** aimed at creating an environment and introducing training initiatives that are conducive to encouraging the average citizen to act, have been implemented over the past few years. It is important, now, that such policies be made more efficient and effective.

## ❖ ESTABLISHING AN ENVIRONMENT THAT WILL ENCOURAGE CITIZENS TO ACT IN THE EVENT OF AN EMERGENCY

In the event of a medical emergency, the physical environment (availability of a first aid kit, extinguishers, etc.) should make it as easy as possible for the citizen to set the rescue chain in motion. With this in mind, the provision of external defibrillators in public places might enable a cardiac arrest to be dealt with more quickly and efficiently. Likewise, clearly identified emergency telephone lines are of the utmost importance in any emergency situation.

### ❖ Promoting the European emergency number

It is essential that the pre-hospital emergency services or the fire service be called before any form of first aid is administered to a victim, meaning that awareness of the appropriate emergency numbers is crucial.

In France, for example, there are three national emergency lines (15, 17 and 18), as well as the emergency number common to all EU countries (112)<sup>(15)</sup>. Indeed, whilst countries such as Denmark, Sweden and the Netherlands have made 112 their only emergency number, France decided to introduce it alongside the pre-existing national numbers. 112 was primarily intended to be used by foreign tourists visiting France, even though, in reality, anyone can use it. All incoming calls are redirected to lines 15 or 18, depending on which region you are in, and in fact, only 14% of French citizens use it as an emergency number, as opposed to an average 50% of Europeans in general.

#### ❖ Box 2

#### 114, 3117 and 115: other French emergency lines

Emergency numbers are not limited to the three most frequently used lines. The 114 line, which can only be accessed by fax or SMS and is aimed at those who are deaf or hard-of-hearing and who fall victim to or witness an emergency situation requiring the intervention of the emergency services, for example, was introduced in 2011.

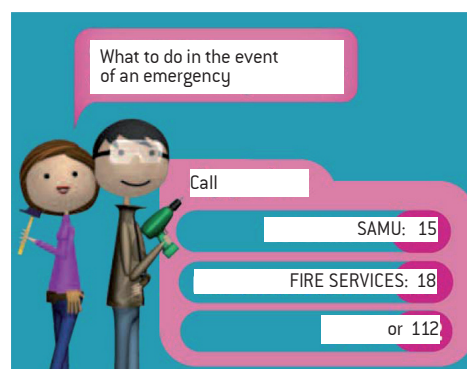
Another emergency number, 3117, enables users of the Transilien rail network to contact the emergency services to alert in the event of any incident they might fall victim to or witness and that jeopardises passengers' safety. The introduction of this number is justified by the fact that, in most cases, when calls are made from mobile phones aboard a train, the emergency services (fire service, emergency ambulance service, police, etc.) are obliged to involve the SNCF (French railway company) in order to identify and locate the train in question. Calls to the 3117 number are directed to one of the five call centres located near the major Parisian stations, which will then take the appropriate measures with the relevant services. The 115 number, meanwhile, is devoted specifically to emergencies concerning the homeless.

There are various factors behind France's decision to maintain separate numbers, including the following:

- ▶ to distinguish from the outset those calls relating to emergencies requiring the scene to be secured and those involved to be brought to safety (fires, gas leaks, car accidents, etc.) from those relating purely to medical matters;
- ▶ to maintain the same numbers so as not to confuse the population;
- ▶ the existence of high levels of tension between the various stakeholders involved, which also made any kind of merger impossible when it was considered in 2006 following a report published by the IGA/IGAS<sup>(16)</sup>.

This decision could, however, be challenged. First and foremost, fragmenting the numbers in this way makes it harder to memorise them and might therefore result in unnecessary hesitation when it comes to dialling the appropriate number, particularly in stressful situations (figure 1).

❖ Figure 1  
Outside back cover of an everyday accident prevention brochure



SAMU: French emergency medical services.  
Source: 'Bricolage, les précautions à prendre' ('DIY, precautionary measures') brochure, INPES.

[15] Calls to the 112 number are directed to the fire service or the SAMU-Centre 15, depending on the region.

[16] Diederichs D. et al. (2006), *Secours à personne*, report by the Inspectorate General of Administrative Affairs and the Inspectorate General of Social Affairs (IGA/IGAS).

Neither is it easy for the user to determine the appropriate emergency services to call if they do not have all of the necessary information. Whilst people appear to be perfectly aware of the importance of alerting the emergency services (according to a 2010 survey<sup>(17)</sup>, nine out of ten French citizens know that they should call the emergency services if someone suffers a cardiac arrest in front of them), they are much less certain when it comes to knowing exactly which services to call, with 40% claiming they would call the fire service, 38% the emergency services (without specifying which) and 26% the SAMU mobile medical emergency unit. Irrespective of the user's choice, the service(s) dispatched in response to the call primarily depend(s) on the location and the respective times it will take to reach the scene of the incident. Calls to the SAMU, for example, might be answered by the fire service, the role of which in the rescue of victims has been recognised in a joint framework of reference<sup>(18)</sup>. Of course, a situation will often require the intervention of both services simultaneously, as is the case with fires that have injured victims, for example.

Combining the emergency numbers into a single point of contact would there appear to be the most appropriate option. As the *Cour des comptes* points out, this merger could improve the "effectiveness of telephone coordination". Although the 15 and 18 services are interlinked, having a single emergency call centre could accelerate organisation and improve dispatch coordination, thus giving the victim the best possible chance of survival.

Furthermore, this would help reduce operating costs and improve the legibility of the system from the user's perspective<sup>(19)</sup>. Using the European number as the single number would also be useful to citizens when travelling.

Combining the numbers would require the necessary short-term logistical measures and investment to be put in place for the purposes of creating single call distribution platforms and training the appropriate staff.

The European emergency number could also then be promoted to facilitate its adoption by the French population. French citizens are currently largely unaware of the 112 number since only 29% know that this number is valid right throughout Europe<sup>(20)</sup>. Whilst a number of local initiatives have been introduced, notably in border areas where people travel to another country on a regular basis<sup>(21)</sup>, it would be essential that a communications campaign be launched at national level.

## PROPOSAL 1

**To undertake the process of replacing the French current emergency lines (15 and 18) with the European emergency number (112). To simultaneously launch a campaign aimed at promoting this future single number among the public.**

Certain countries have gone even further than merging their emergency medical services and their fire service<sup>(22)</sup>. Belgium, for example, which had a single emergency number (that is one that united both medical and fire services), has taken the decision to merge it with the police line on 112 in 2013. Such a merger has already taken place in Flanders, and a similar structure has been in place in Romania since 2008, showing that a well-structured distribution platform with properly trained front-line telephone operators enables all of the stakeholders involved to handle calls in their own field of intervention and organise the appropriate response (reassurance, advice or the dispatch of a mobile team). Based on this model, and having already merged the 15 and 18 services, France might eventually consider using the 112 number for responding to calls currently received to the emergency number for the police (17).

### Box 3

#### E-call: the automatic emergency service call system for serious road accidents

The e-Call initiative, driven by the European Commission, is designed to encourage the widespread installation of an onboard system that can instantly alert the 112 service in the event of a serious accident, irrespective of whether or not the occupants of the vehicle are conscious. This system activates the vehicle's SIM card using a series of shock-detection sensors. A vocal connection is then established between the 112 operator and the vehicle, enabling the passengers to provide details of the incident if they are able to do so. The operator will simultaneously receive details of the exact location of the accident and can then dispatch the necessary resources. Nine countries have been trialling the system on a large scale since 2011<sup>(23)</sup> with the aim of ironing out any issues relating to telephone interoperability and the management of this new type of call within 112 centres. Indeed, in July 2012, the European Parliament called upon the European Commission to adopt a bill making the e-call system compulsory for all new cars by 2015.

[17] IFOP study (2010), "Les Français et l'arrêt cardiaque".

[18] In 2008, a joint framework of reference for the fire service and emergency physicians was introduced in an attempt to clarify their respective roles and improve cooperation between them. It was put together by a quadripartite committee including the French Ministry of the Interior, the French Ministry of Health, representatives of the fire service and hospital-based emergency physicians.

[19] Cour des comptes (2006), "Les urgences médicales : constats et évolutions récentes".

[20] According to a Eurobarometer survey conducted in January 2009.

[21] The '112 Academy', for example, which works with the French Ministry of Education in Lorraine to promote the 112 service among pupils.

[22] As previously mentioned, the Scandinavian countries have long had a single emergency number for reaching all of their emergency services (112).

[23] It should also be noted that six new countries were incorporated into the project in January 2013.

## Improving the localisation of external defibrillators

The sophistication of external defibrillators and the increase in the number of locations in which they are available have helped save many lives in recent years. Automated external defibrillators (AEDs) are devices able to analyse the cardiac activity of a person in cardio-respiratory arrest and administer an electric shock designed to restart the heart. This early defibrillation, combined with cardiopulmonary resuscitation (CPR)<sup>(24)</sup>, or cardiac massage, greatly increases the chances of survival for a victim showing signs of ventricular fibrillation<sup>(25)</sup>, the primary cause of sudden death in adults (Box 4).

### Box 4

#### The strategy for installing AEDs in public places pays off in Japan

In 2004, Japan authorised the use of AEDs by all citizens and decided to embark upon an ambitious policy for the provision of such devices in public places. As a result, the total number of AEDs located throughout the country increased from 10,000 in 2005 to 300,000 in 2012<sup>(26)</sup>. The strategy governing the installation of the devices was supported by an increase in the trainings provided in schools by associations with equipment that is less bulky and costly than dummies can be [figure 2].

Figure 2



Source: <http://osakalifesupport.jp/association/shohin.html>.

A study was carried out alongside this national strategy to assess the effects of this widespread provision of AEDs on managing instances of cardiac arrest outside of a hospital environment<sup>(27)</sup>. The results show that the time taken to administer the first electric shock is 50% lower in areas equipped with at least four AEDs per square kilometre than in those with less than one AED per square kilometre. Furthermore, the chances of the victim surviving with no neurological damage are three times higher in those areas with the highest numbers of defibrillators.

In France, meanwhile, regulations governing the use of external defibrillators have gradually evolved since they were first marketed in 1994. Having originally been considered the exclusive domain of medical personnel, they started to be used by certain other healthcare professionals and voluntary first-aiders in 1998, before becoming entirely liberalised in 2007 as the result of a decree stating that 'any person, irrespective of whether or not they are medically trained, is permitted to use an automated external defibrillator'.

The AED works in a relatively intuitive way, meaning that no training is required in order to be able to use it. Having said that, the fact that more than a third of French citizens asked in 2009 claimed that they would not dare to use one, indicates that some brief basic training in using these devices might still be beneficial<sup>(28)</sup>.

There are currently between 60,000 and 100,000 AEDs throughout France thanks to voluntary action on the part of many regional authorities, associations and private organisations.

Indeed, since there is no legal obligation for public authorities to acquire such devices, they are responsible for making the appropriate purchases in accordance with the characteristics of their respective populations (a high concentration of citizens over 50, for example, has been identified as a risk factor). Likewise, employment regulations do not state that a defibrillator must be available as an emergency precaution, unlike those that apply to other emergency intervention systems, such as extinguishers. It is up to the employer, as part of their risk assessment and in consultation with their occupational physician and employee representatives, to decide whether there is a need to have one installed. 2011 saw the RMC/BFM association launch the *Charte du Cœur* ('Heart Charter'), which aimed, notably, to promote the installation of defibrillators on company premises. 120 organisations currently subscribe to the scheme. Likewise, dispensing pharmacy group Giropharm has equipped some 850 of the pharmacies in its network with a defibrillator. Such a strategy would appear perfectly appropriate, since pharmacies are easily identifiable and generally perceived as a source of aid in the event of an emergency health problem.

Various studies have highlighted areas with high levels of traffic (shopping centres, airports, stations, etc.) and sports facilities<sup>(29)</sup> as strategic sites for the installation of AEDs. Fitting them in private homes, on the other hand,

[24] First aid consisting of rapidly applying firm pressure to the chest of a person in cardio-respiratory arrest.

[25] A condition that prevents the ventricles of the heart from contracting effectively, generally causing the heart to arrest.

[26] Iwami T. (2012), "Effectiveness of public access defibrillation with AEDs for out-of-hospital cardiac arrests in Japan", *Japan Medical Association Journal*, vol. 55, n° 3.

[27] Kitamura T. et al. (2010), "Nationwide public-access defibrillation in Japan", *The New England Journal of Medicine*, vol. 362, no. 11.

[28] TNS Healthcare/Fédération Française de Cardiologie survey (2009), "Les Français et l'arrêt cardiaque".

[29] Winkle R.A. (2010), "The effectiveness and cost effectiveness of public-access defibrillation", *Clinical Cardiology*, et Folke F. et al. (2009), "Location of cardiac arrest in a city center: Strategic placement of automated external defibrillators in public locations", *Circulation*, 120(6).

would appear to have little or no impact on mortality<sup>(30)</sup>, particularly given the difficulty for those outside of the home to gain access. A system would therefore need to be put in place whereby those homes equipped with an AED could be visually identified by means of a sticker affixed to the letterbox, for example, or to have them installed in building hallways.

Generally-speaking, the major concern is to **be able to quickly locate** AEDs, given that action must be taken within the first ten minutes of the cardio-respiratory arrest occurring. Indeed, a decree adopted in 2010 made it possible to standardise the terms governing the indication of defibrillators (figure 3), thus making the devices easier to recognise<sup>(31)</sup>.

Various initiatives undertaken by private operators have made it possible to locate nearby defibrillators and indicate the locations of new ones (in the form of smartphone applications and websites), whilst the French Ministry of Health, for its part, has funded an experiment conducted by the *Association pour le Recensement et la Localisation des Défibrillateurs* ('Association for the Inventory and Localisation of Defibrillators', ARLOD) with the aim of creating a reliable database of location points that is updated on a regular basis and accessible to the emergency services. Although such initiatives are a definite sign of progress, their limited implementation at national level means that it is not possible to **compile an exhaustive inventory** and therefore optimise the use of existing devices.

Figure 3



Source: decree of 16 August 2010.

This situation could be remedied by using the tools already developed to encourage both individuals and companies or local authorities to **declare the installation of AEDs** using a short form that is available online. This voluntary declaration procedure should be evoked every time such a device is purchased and also be open to those that already own one. Data gathered in this way could

then be fed into a **national public database** that could be used by the telephone emergency services to quickly direct other witnesses to the nearest device whilst someone else is performing cardiac massage. An easy-to-access digital map should also be made available to all citizens.

## PROPOSAL 2

**To create a public database of all defibrillator location points in order to enable the telephone emergency services and citizens to locate the closest device.**

### TRAINING, AWARENESS AND PREVENTION: THE THREE KEYS TO SUCCESSFUL CIVIC FIRST AID

**A large number of training initiatives that nevertheless exclude most of the population**

There is currently provision for **compulsory introduction to or training in first aid** in two spheres, these being schools and the workplace, in certain professions.

Since 2004, for example, the law<sup>(32)</sup> has stipulated that all pupils reaching the end of Year 10 must have received **some form of first aid training** during their school years (*Prévention et Secours Civiques de Niveau 1* - 'Level 1 Civic Prevention and First Aid', PSC1). Furthermore, pupils studying for certain qualifications, notably the *Certificat d'Aptitude Professionnelle (CAP)* vocational qualification and the *baccalauréat professionnel* must have received appropriate first aid training for the world of work<sup>(33)</sup>. **Young citizens can also take advantage of the Journée Défense et Citoyenneté (JDC, 'National Defence and Citizenship Day')**<sup>(34)</sup>, to receive a **basic introduction to first aid** lasting a little over an hour. It should also be noted that plans to make the PSC1 compulsory for **those seeking to obtain a driving license**, rather like the systems in place in Germany and Switzerland, have been put forward on several occasions in France. These plans are yet to be put into practice, largely due to the extra cost it would involve and the fact that the training provided in schools and as part of the JDC renders it unnecessary.

[30] Bardy G.H. et al. (2008), "Home use of automated external defibrillators for sudden cardiac arrest", *The New England Journal of Medicine*, no. 358.

[31] The decree of 16 August 2010 stipulated the graphical characteristics the signs must have; there should be a series of four panels - one indicating that the establishment is equipped with such a device (a white heart with a green lightning bolt), the others enabling the device to be located.

[32] Public health law of 9 August 2004 [Art. 48] and Civil Safety Modernisation Law of 13 August 2004 [Art. 4 and 5]. Decree no. 2006-830 of 11 July 2006 included in the common first aid knowledge base.

[33] It should be noted that primary school pupils might already have some knowledge of first aid thanks to voluntary educational teams. The French Ministry of Education published a guide entitled *Apprendre à porter secours* ('Learning to Administer First Aid') and aimed at school teachers in 2007 (update planned for 2013-2014). A Norwegian study has shown that children as young as 4-5 years of age are able to learn the basic rules of first aid. Bollig G., Myklebust A. and Østringen K. [2011], "Effects of first aid training in the kindergarten - a pilot study", *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, no. 19.

[34] Young people have to be involved in this day between the ages of 16 and 25 years.

Furthermore, those working in certain sectors are required to have some first aid training simply to do their job, particularly school teachers, health professionals and taxi drivers<sup>(35)</sup>. Dangerous workshops and building sites with over twenty employees must also, for their part, have a first-aider on-site<sup>(36)</sup>.

Many professionals are often encouraged, if not legally required, to undertake such training, as is the case of administrative and technical staff of health establishments<sup>(37)</sup> and those working with young children. Moreover, any employee wishing to receive first aid training may request such training as part of their right to training<sup>(38)</sup>, with some 300,000 salaries benefiting from the scheme every year. This figure could increase were health, safety and working conditions committees to really take hold of the issue and promote such training within their establishments.

Beyond the educational and professional spheres, it is possible to sign up to voluntarily undertake in your spare time one of the various training modules offered by associations and bodies approved by the French Ministry of the Interior, which is responsible for first aid in France.

With this in mind, between all of the training options available, it is estimated that over 1.5 million people in France receive basic first aid training or refresh their knowledge of first aid every year<sup>(39)</sup>. Nevertheless, the majority of French citizens are less than familiar with first aid techniques and a large proportion of them would feel helpless and be afraid to act in the event of an emergency.

There are, in fact, various obstacles to the provision of such training. Firstly, they require time, although they have been considerably streamlined over recent years (having been reduced from 40 hours in the 1980s to 7 hours since 2012 for the PSC1 programme, for example<sup>(40)</sup>). Furthermore, the training programmes provided are governed by a series of strict statutory texts based on scientific frames of reference<sup>(41)</sup>. Whilst their theoretical aspects might have gradually given way to practice, they are still quite rigid, rather technical and very intense, which might jeopardise the participant's ability to retain the knowledge and skills they have acquired and to put them into practice.

Such training also requires certain financial and material means. Training provided to volunteers as a hobby, for example, is likely to cost the individual around 60 euros, an expense that could well be seen as an obstacle. With this in mind, the introduction of a tax credit for anyone receiving training from an association in their own time would likely encourage more people to undertake such training. This would be a strong indication on the part of the public authorities of the importance of such training whilst at the same time reducing the associated cost.

### PROPOSAL 3

**To consider introducing a tax credit for anyone receiving first aid training, provided by an association, in their own time.**

Furthermore, those who have received training rarely take the time to refresh their knowledge and skills (due to a lack of time, a lack of motivation, etc.), despite the fact that this is essential for the purposes of reinforcing their self-confidence and therefore reducing the number of individuals who, despite having been trained, would not be prepared to put their first aid skills to use in a practical situation. Repeating the messages conveyed over time will help relieve people's fears of doing further harm or injuring themselves and will eventually enable them to take the necessary measures without even thinking about it. Any strategy designed to encourage the involvement of citizens in emergency situations should therefore take into account the various stages of an individual's training, namely a comprehensive initial training programme, followed by brief refresher courses throughout their lifetimes.

It is also important to support the provision of extensive and compulsory training in schools and to simultaneously encourage more widespread familiarity with basic emergency skills by means of a series of more flexible tools.

#### Supporting the provision of initial training in schools

Within the school system, time and budgetary restraints, combined with a lack of sufficient expertise, have thus far prevented the French Ministry of Education from achie-



[35] Decree of 3 March 2009 relating to the conditions governing the organisation of the *Certificat de Capacité Professionnelle de Conducteur de Taxi* ('Professional taxi driver's certificate of proficiency') exam.

[36] Article R4224-15 of the French Employment Code.

[37] Obtaining the *Attestation de Formation aux Gestes et Soins d'Urgence Niveau 1* ('Certificate of Training in First Aid Level 1', AFGSU1); circular DGOS/DGS/RH1/MC/2010/173 of 27 May 2010 relating to the obligation to obtain proof of training in first aid in order to practice certain health-related professions.

[38] Obtaining the qualification of *Sauveteur Secouriste du Travail* ('First Aid at Work' certificate, SST).

[39] *Fédération Française de Cardiologie* website [<http://www.fedecardio.org/1vie3gestes/node/20>].

[40] Decree of 16 November 2011 modifying the modified decree of 24 July 2007 stipulating the national framework of reference for civil safety skills relating to the teaching unit entitled *Prévention et Secours Civiques de Niveau 1* ('Level 1 Prevention and Critical First Aid').

[41] The French Ministry of the Interior has set about modifying the texts so that they are based primarily on skills and not on the techniques to be used.



ving the legal objective of training 100% of a given year group. There is, however, evidence of a positive trend in that whilst 3% of Year 10 pupils received training in 2007-2008, this figure had increased to 20% in 2011-2012.

The obligation to receive training as of adolescence could serve as a **priming strategy** so that when these pupils become adults they will be more open to communications on such issues and more inclined to refresh their knowledge (particularly since those under 35 years of age demonstrate the highest levels of interest in learning first aid techniques<sup>(42)</sup>). Furthermore, training children would likely have the **effect of indirectly training the parents**<sup>(43)</sup>, in light of which it would appear important to **bring the legal obligation for all pupils to receive training at the end of Year 10 into force**. Training for children is currently provided either by teachers, who have themselves been trained to provide first aid training, or by approved associations in the event that the necessary internal resources are not available. From a financial perspective, the former option is more beneficial to the Ministry of Education.

Whilst the number of teachers qualified to provide such training is still relatively low, it would, nevertheless, appear perfectly possible to rapidly increase this number with the help of the new *Écoles Supérieures du Professorat et de l'Éducation* (teacher training and education colleges, ESPE) which will be providing training for new teachers and other education professionals as of the start of the 2013 academic year. It is important to give volunteers the opportunity to complete a module enabling them to become trainers, thus feeding into the pool of qualified staff within the French Ministry of Education to train pupils. Furthermore, the current obligation on the part of school teachers and physical and sports education teachers to hold a first aid qualification should be extended to all members of the teaching body in order to improve the safety of both pupils and teaching staff.

## PROPOSAL 4

### In teacher training and education colleges:

- to train all teaching staff in first aid;
- to offer training to become first aid trainers.

Even if a sufficient number of trainers within the Ministry of Education is being trained, **cost would remain a significant constraint**, with overtime pay (since the training takes place outside of teaching hours) and equipment

representing a major financial burden for educational establishments and regional authorities. This was another factor in the French Ministry of Education's decision to sign in 2011 a five-year agreement with MAIF, mutual insurance company, notably for the provision of training kits.

### Encouraging awareness among the population of what to do in an emergency

In addition to a general pupil training policy, it is important that **basic knowledge of first aid be made more widespread by raising awareness among the population as a whole**. This would involve a two-pronged objective:

- ▶ firstly, to reach those people who have not received training at school and who are unlikely to take the necessary steps to obtain training themselves;
- ▶ secondly, to enable those who have received training to refresh their knowledge under informal circumstances, making thus effective the public strategy to awaken the population to the importance of first aid.

Rarely have first aid techniques been the subject of public communication campaigns<sup>(44)</sup>. It could, therefore, prove beneficial to **reinforce and revive strategies designed to raise public awareness of the basic steps to take**.

First and foremost, **communications need to be reviewed**, since in trying to encourage people to receive training, campaigns all too often appear to discourage the average citizen from taking the initiative in the event of an emergency (figure 4). It would, on the contrary, be worthwhile conveying the message that the most important thing when it comes to citizens administering first aid is **not to achieve perfection in performing the appropriate technique but rather to act when needed**.

Figure 4

### Last page of a domestic accident prevention leaflet

#### Know what to do in an emergency

Less than one in ten French citizen is familiar with first aid techniques.

Such techniques are, nevertheless, easy to learn.

It is important to be familiar with a few basic techniques in order to be able to act in the event of an emergency to help save your child and prevent their condition from worsening.

Emergency techniques are only effective if perfectly executed.

Source: National campaign: Protégez votre enfant des accidents domestiques ('Protect your child from domestic accidents').

[42] TNS Healthcare survey (2007), "Les Français et l'arrêt cardiaque" carried out for the *Fédération Française de Cardiologie*.

[43] It is estimated that across the population as a whole, almost all of those who have received training would recommend training to those around them and that two-thirds would share their knowledge. Source: White J. et McNulty A. (2011), *Assessing the Link Between First Aid Training and Community Resilience*, British Red Cross.

[44] It should be noted that in June 2012 the European Parliament proposed the introduction of a European Cardiac Arrest Awareness Week (Declaration of the European Parliament of 14 June 2012).

Based on this major principle, a series of regular campaign relating to different emergency situations (cardiac arrest, allergic reaction, choking, etc.) could be launched with the involvement of government bodies, learned societies and associations. These should be based on **very clear, highly simplified messages** that are therefore **not only easy to remember but also easy to put into practice**<sup>(45)</sup>. With this in mind, the *British Heart Foundation* launched a campaign in late 2011 which notably featured a famous former football player in a humorous clip showing how to perform cardiac massage without insufflation to the beat of disco classic *Stayin' Alive* (figure 5)<sup>(46)</sup>. The association claims that some thirty lives will have been saved in the space of a year thanks to this video and the associated campaign.

It is also important to make basic first aid training more **accessible** by bringing it as close to the public as possible, by offering training in public waiting areas (airports, stations, shopping centres, etc.), for example. With regards to transit areas such as these, it would be worthwhile redesigning **basic introductory training programmes** to ensure that messages can be conveyed to **large groups** and in a **very short space of time**. A study has shown, for example, that training in cardiac massage and the use of defibrillators lends itself particularly well to such short-format courses<sup>(47)</sup>.

Figure 5

Final image of the Stayin' Alive campaign video



Source: British Heart Foundation.

Furthermore, it is essential to enhance the **appeal of learning** by making basic first aid training less anxiety-inducing and more fun (Box 5), notably through the use of **digital media and tools** (smartphone applications<sup>(48)</sup>, e-learning and social network-based challenges, etc.). Serious gaming website *stayingalive.fr*, for example, enables the user to simulate cardiac massage and defi-

brillation in 3D. Data also shows that video-based training can be as effective as face-to-face training<sup>(49)</sup>.

Box 5

Communications initiatives on the part of the St. John Ambulance in the United Kingdom

British first aid organisation St. John Ambulance has adopted a major multi-channel communications strategy designed to raise awareness of first aid techniques. It has launched, for example, a smartphone application that has been downloaded 200,000 times since 2010, as well as an online game. *Rescue Run* enables the user to learn or revise first aid techniques without even realising it by moving around a virtual urban environment and 'performing' the appropriate techniques on passers-by who are choking, haemorrhaging or have suffered a fall. The St. John Ambulance has also launched an Internet-based video campaign, *Learn with Jack*, featuring a famous English footballer showing how to perform cardiac massage. The association even goes as far as to publicly reward first aid 'heroes' of all ages to highlight what they have done. Such initiatives are proof of a desire to make first aid less anxiety-inducing to the average citizen. Having said that, the association's latest communications campaign, entitled *Helpless*, centred around the broadcasting of a series of 'shock' videos designed to highlight the importance of first aid training. The videos play on the feeling of helplessness of those close to the victim when they are unable to act in the event of an accident, whereas they would have been able to intervene, had they received first aid training.

PROPOSAL 5

To bring the means used to circulate first aid-related information up to date by:

- circulating shorter, more targeted messages designed to facilitate the assimilation of the information;
- making use of the places and times when people are most available and receptive (such as airports, stations, etc.);
- using digital tools and materials designed to reduce the stress associated with learning such concepts.



(45) The *Fédération Française de Cardiologie* also launched a communications campaign on the theme of "1 vie = 3 gestes – Appeler, masser, défibriller" ('1 life = 3 steps - Call, massage, defibrillate') in France and without government funding.  
 (46) Web page of the British Heart Foundation campaign: <http://www.bhf.org.uk/heart-health/life-saving-skills/hands-only-cpr.aspx#panel1-1>. Link to the *Hands only CPR, Stayin' Alive* video: <http://www.youtube.com/watch?v=hcQG2MMegXw&feature=youtu.be>.  
 (47) Roppolo L., Pepe P., Campbell L. et al. (2007), "Prospective, randomized trial of the effectiveness and retention of 30-min layperson training for cardiopulmonary resuscitation and automated external defibrillators: The American airlines study", *Resuscitation*, 74(2).  
 (48) The French Red Cross, for example, has created *L'Appli Qui Sauve* ('The App that Saves') for smartphones and *preparezvous.eu*, a website teaching "life-saving techniques".  
 (49) Einspruch EL, Lynch B. et al. (2007), "Retention of CPR skills learned in a traditional AHA Heartsaver course versus 30-min video self-training: a controlled randomized study", *Resuscitation*, 74(3).

## Combining first aid training with the diffusion of prevention messages

Citizens should not only be able to respond to an emergency but also know how to reduce the chances of the incident occurring in the first place.

Spreading awareness of first aid techniques would benefit from being more closely connected with prevention messages, each complementing and reinforcing the other.

This has already been taken on board by associations, as demonstrated by the website: [autoprotectionducitoyen.eu](http://autoprotectionducitoyen.eu), designed by a consortium of several European branches of the Red Cross. For each type of accident (such as 'burns', for example) there are corresponding tips on preventing such accidents ("turn pan handles towards the wall") and specific first aid techniques that should be adopted ("hold the burn under non-ice-cold running water for at least 5 minutes").

Likewise, training courses can bridge the gap between prevention and first aid techniques. With this in mind, the French Red Cross adds an eighth hour to the regulatory seven PSC1 hours to provide future first-aiders with an introduction to risk prevention.

The Belgian Red Cross, meanwhile, offers a *Bosses et bobos: premiers secours aux enfants* ('Knocks and bumps: children's first aid') training course designed to provide information on preventive behaviours and dealing with children's health issues, from minor injuries to serious accidents. Indeed, young parents, who often need reassurance when it comes to their children's health, are particularly receptive to this type of message. Developing training programmes that focus on the prevention of accidents and the first aid techniques you should be familiar with when looking after young children, during the time on the maternity ward, for example, could therefore be an effective means of getting these messages across.

## PROPOSAL 6

### To provide training in maternity wards for young parents, combining both advice on risk prevention and first aid training.

The desire on the part of public authorities to bridge the gap between reducing the risks and acting in the event of an emergency is still largely embryonic, since the respective issues of prevention and first aid techniques are governed by different bodies. It would indeed be beneficial for the *Institut National de Prévention et d'Éducation pour la Santé* ('French National Institute for Prevention and Education in Health', INPES) to be able to more systematically incorporate the promotion of first aid techniques into what it does. It has, in fact, started to do so where domestic accidents are concerned by means of the website: [prevention-maison.fr](http://prevention-maison.fr).

Of course, whilst training the average citizen is crucial, it is important not to downplay the importance of securing the environment by regulatory means. Indeed, regulations relating to both manufactured goods (the European standards applicable to toys, for example, help prevent children from swallowing teddy bears' eyes) and safety systems (the obligation to secure private swimming pools resulted in a drastic fall in the number of drownings) or risky behaviours (such as traffic speed limits) are just some of the ways of preventing accidents.

**CONCLUSION** Combining emergency training at school age with raising awareness of first aid techniques and preventive messages on a lifelong basis should result in more assertive and effective civic action in the event of an accident occurring. The various administrations involved in the first aid sector (Ministries for the Interior, Health and Education) must better coordinate their respective initiatives if they are to encourage both the population and all of the stakeholders involved in the issue to tackle.

► **Keywords:** first aid, first aid techniques, cardiac massage, defibrillator, training, emergency number.



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“Acts of first aid: a civic responsibility”

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